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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,013	09/08/2004	Hiroshi Matsubayashi	Q83539	7684

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EXAMINER

LAVILLA, MICHAEL E

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/507,013

Applicant(s)

MATSUBAYASHI ET AL.

Examiner

Michael La Villa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10 and 12 is/are rejected.
- 7) ☒ Claim(s) 7 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20040908</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:
2. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 3, 5, and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - I. Regarding Claim 3, it is unclear whether this claim demands an "(i-2)" layer or not. It is unclear whether this claim means that when an "(i-2)" is present, the layer is to further comprise Fe in a part thereof.
 - II. Regarding Claims 5 and 6, it is unclear what is meant by the phrase "by the treatment by using." Is the phrase "by the treatment" merely superfluous?

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
5. A person shall be entitled to a patent unless –
 - (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
 - (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sakai et al. JP 05-004302. Sakai et al. teaches a steel sheet that is coated with a Fe/Zn layer, a silane coupling layer, and a thermoplastic polyester layer. See Sakai (Abstract; paragraphs 16, 17, 19-21, 26, and 29; Tables 1 and 2).
7. Claims 1-5, 8, 9, and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Nakakoji et al. JP 2003-003281. Nakakoji et al. teaches a Fe/Sn plated steel sheet that is further coated with silane coupling agent and thermoplastic polyethylene terephthalate polyester film, wherein said sheet is used for making beverage cans. See Nakakoji (Abstract; claims 1-7; paragraphs 1-3, 5-8, 12, 14-16, 34-36, 44, 45, 48, 49, and 58; and Table 1).
8. Claims 1-3, 8-10, and 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Shimizu et al. JP 2002-113809. Shimizu et al. teaches a steel sheet that is coated with Sn, silane coupling agent, and thermoplastic polyethylene terephthalate/isophthalate, wherein the sheet is used for making beverage cans. See Shimizu et al. (Abstract; Claims 7, 12, and 13; paragraphs 8, 9, 15-17, 22-25 and Table 1).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et

al. JP 05-004302. Sakai et al. teaches a steel sheet that is coated with a Fe/Zn layer, a silane coupling layer, and a thermoplastic polyester layer. See Sakai (Abstract; paragraphs 16, 17, 19-21, 26, and 29; Tables 1 and 2). Sakai teaches a range of areal coating densities for the silane layer and a variety of silane materials. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the various silane materials in the laminates of Sakai throughout the entire range of effective silane material areal densities as disclosed by Sakai. It would be expected, in view of the relative weights of atomic Si and the molecular weights of the silane materials, as well as the permissible areal coating densities, that some of these applied layers would obtain the claimed silicon areal densities of Claim 4.

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu

et al. JP 2002-113809. Shimizu et al. teaches a steel sheet that is coated with Sn, silane coupling agent, and thermoplastic polyethylene terephthalate/isophthalate, wherein the sheet is used for making beverage cans.

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See Shimizu et al. (Abstract; Claims 7, 12, and 13; paragraphs 8, 9, 15-17, 22-25 and Table 1). Shimizu teaches a range of coating thicknesses for the silane layer. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply conventional silane materials in the laminates of Shimizu throughout the entire range of effective silane material thicknesses as disclosed by Shimizu. It would be expected, in view of the relative weights of atomic Si and the molecular weights of the conventional materials, as well as the permissible thicknesses, that some of these applied layers would obtain the claimed silicon areal densities of Claim 4.

Allowable Subject Matter

13. Claims 6, 7, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the reviewed prior art nor prior art of record teaches or suggests the subject matter of Claims 6, 7, and 11. Particularly, the claimed silane materials in combination with the other claimed features of Claims 6 and 7 are not taught or suggested. As well, inclusion of ionomers in conjunction with the other claimed features of Claim 11 is not taught or suggested.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is

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(571) 272-1539. The examiner can normally be reached on Monday through Friday.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael La Villa
9 July 2005



MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER